

REMARKS

With this Amendment, Applicant cancels claims 8, 9, and 20. Therefore, claims 1-7, and 10-19 are all the claims currently pending in this Application.

Claim Rejections — §112, first paragraph

Claim 20 stands rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. Applicant cancels claim 20. In doing so, Applicant does not concede that the subject matter of claim 20 fails to comply with the written description requirement and accordingly, Applicant reserves the right to pursue the cancelled claim 20 in a continuation Application.

Allowable Subject Matter

The Examiner indicates that claims 9-11 contain allowable subject matter and would be allowed if rewritten into independent form. The limitations of claim 9 have been incorporated into independent claim 1.

The Examiner indicates that claims 17 and 19 are allowed.

Claim Rejections — §112, second paragraph

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner asserts that the term “anteriorly” is a relative term which renders the claim indefinite. Applicant respectfully disagrees.

Applicant submits that the term “anterior” is widely accepted and well recognized in the medical profession to mean at the front of a body. The term is contrasted with the term

"posterior" which means at the back of a body. The terms "anterior" and "posterior" are standard directional terms, the meanings of which can be obtained from any anatomy or physiology text for the human body, for example, Tortora, G. J. and Anagnostakos, N. P. (1984) "Principles of Anatomy and Physiology" Harper International Addition, Harper and Row, New York. Thus, when used to describe a replacement lens for the eye, the anterior surface would be clearly understood to mean the surface positioned at the front of the body, facing away from the retina, and the posterior surface would be clearly understood to mean the surface of the lens positioned at the back of the body, or facing towards the retina.

Moreover, Applicant submits that the claims must be read in view of the specification, in which use of the term "anteriorly" corresponds with the accepted meaning of the term. This is clearly evident in the description and figures, for example, at the paragraphs beginning at page 5, line 4, page 5, line 17, page 5, line 24, page 6, line 1, and page 7, line 6. In the specific, illustrative example at page 5, lines 4 to 10, it would be understood by the skilled addressee having read the specification that the oblique incident light would desirably be refracted "anteriorly as opposed to posteriorly." From this statement alone, the meaning of anterior and posterior would be self-evident, as photic disturbances are due to light being directed posteriorly, i.e. at the retina, thereby causing the photic disturbance, rather than anteriorly, or away from the retina. Applicant submits that given the accepted meaning of the term to denote at the front of the body, as well as the deliberate use of the term within this context in the specification, the meaning of "anteriorly" would be clearly and commonly understood by one of skill in the art, for example, an ophthalmologist or manufacturer of intraocular lenses. Accordingly, the Applicant

submits that claims 1-20 are not rendered indefinite by the use of this term, and, therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claim Rejections — §102

Claims 1-4 and 12-18 stand rejected under 35 U.S.C. §102(e) as allegedly anticipated by Portney (U.S. Publication 2003/0199976). With this Amendment, Applicant amends claim 1 and claim 16 to incorporate the limitations of claims 8 and 9. The Examiner indicates that claim 9 contains allowable subject matter (Office Action, page 6). Claims 8 and 9 are cancelled. Claims 10, 11, and 12 are amended, accordingly, to depend from claim 1.

The Examiner maintains the view that the lens of Portney is inherently capable of performing the functions of the present invention. The Applicant disagrees with the Examiner that a lens constructed according to Portney would overcome photic disturbances caused by peripheral light focusing, which is the phenomenon described by the present inventor of oblique incident light focused by the cornea onto the light sensitive nasal retina. That Portney does not teach this phenomenon and is not aware of this phenomenon is evident in the disclosure by Portney, for example, see Figure 1, Figure 9 and Figure 17, copies of which are enclosed herewith for reference. In Figure 1, Portney illustrates a prior art Fresnel lens. In this Figure, Portney shows that oblique incident light rays pass through the lens and emerge in parallel (item 20a)(see also the description at paragraph [0057]). Portney therefore teaches that oblique incident light is treated no differently by the lens than light incident at smaller angles (i.e. closer to perpendicular), in that all incident light rays emerge in parallel.

However, peripheral light focusing is a phenomenon taught by the present inventor that shows that oblique incident light rays do not emerge in parallel but are focused towards the nasal retina, which is sensitive to light. This is illustrated in Figure 1(a) where oblique incident light rays are shown to emerge focused rather than in parallel, whereas light rays incident closer to the perpendicular and further along the lens surface emerge away from the nasal retina. In view of this phenomenon, the present invention teaches a lens in which oblique incident light is directed away from the nasal retina onto the non-retinal ciliary body (forward of the nasal retina)(Figure 1(b)), which is not light sensitive.

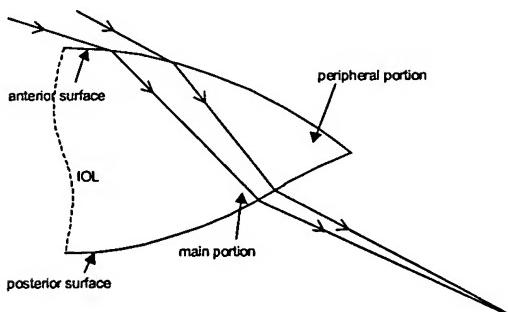


Figure 1(a)

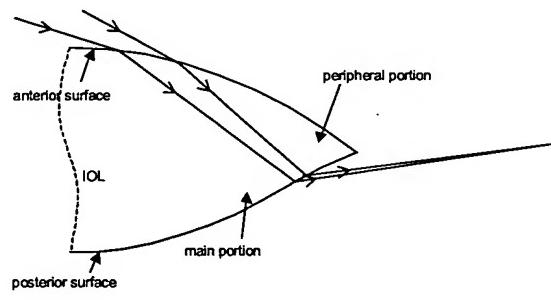


Figure 1(b)

Portney does not teach or suggest photic disturbances caused by the phenomenon of peripheral light focusing, and therefore, the Portney lens is not designed to counteract this phenomenon, despite Portney's claims that the lens will reduce glare. In fact, it can be seen in Portney's lens, as shown in Figures 9 and 17 that oblique incident light is diffracted as it passes through the lens, rather than directed away from the retina, with some of the light rays quite clearly being bent towards the retina (see light rays 112a of Figure 9 and 230b of Figure 17).

Therefore, not only does Portney not teach how to overcome photic disturbances caused by peripheral light focusing, Portney teaches a lens that in fact directs incident light towards the light sensitive retina. Notably, in terms of solving the problem of peripheral light focusing, Portney's lens provides no advantage over the prior art Fresnel lens shown in Portney's Figure 1. Portney's lens is therefore not inherently capable of performing according to a lens of the present invention.

The Applicant reiterates in the present response that photic disturbances caused by intraocular lenses is an ongoing problem in the field of ophthalmology. No intraocular lens currently exists that completely overcomes this problem, and therefore, no prior art lens can be argued to address this problem. The present inventor submits that current intraocular lenses continue to cause photic disturbances because they do not address the phenomenon of oblique incident light being focused onto the light sensitive nasal retina. The disclosure of the present invention teaches the phenomenon of peripheral light focusing and a lens that overcomes this phenomenon.

In view of the above comments and amendments to the claims, Applicant respectfully submits that claims 1-7, and 10-19 are novel in light of the disclosure by Portney, and therefore, respectfully requests reconsideration and withdrawal of the rejection.

Claim Rejections — §103

Claims 5-7 stand rejected as allegedly unpatentable over Portney in view of Brady (U.S. Publication 2003/0144733). The Applicant submits that in view of the comments provided above with respect to Portney, this citation can not be combined with Brady to deny the present

invention according to claims 5-7 of inventive step. Furthermore, claims 5-7 are dependent on claim 1, which as amended is both novel and inventive over Portney in view of Brady. The Applicant therefore respectfully requests that the rejection be withdrawn.

Claims 8 and 19 stand rejected as allegedly unpatentable over Portney in view of Achatz (U.S. Patent 4,813,955). The Applicant submits that in view of the comments provided above with respect to Portney, this citation can not be combined with Achatz to deny the present invention according to claim 8 of inventive step. As claim 8 is dependent on claim 1, Applicant submits that claim 8 is both novel and inventive over Portney in view of Achatz. Notably, as Portney does not teach the benefit of directing light away from the nasal retina, the combination of Portney and Achatz cannot and do not suggest the directing of light forward of the nasal retina. Regarding claim 19, Applicant submits that claim 19 depends from claim 17 and that the Examiner asserts that claims 17 and 19 are allowed (Office Action, page 6).

The Applicant therefore respectfully requests that the rejection be withdrawn.

Conclusion

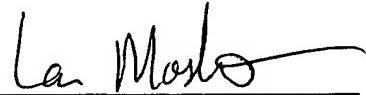
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 10/660,704

Q77494

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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